

Appendix 2: Tobacco-Growing Regions

Regional differences in tobacco farms are important, due to the differences in topography, soils, types of tobacco that can be grown successfully, and nonfarm economic opportunities in various regions. Flue-cured tobacco has been classified into four types, each associated with a different region. The Piedmont (type 11) encompasses the area along the North Carolina/Virginia border. The Coastal Plain (type 12) of eastern North Carolina accounts for the greatest share of tobacco sales. The Pee Dee-Lumber River (type 13) includes the southern part of eastern North Carolina and eastern South Carolina. The Georgia (type 14) region includes Georgia and northern Florida. USDA identifies only one type of burley tobacco (type 21), grown throughout Kentucky, much of Tennessee, and neighboring States. Other cigar, chewing, and smoking tobacco types are also grown in these regions, but production is much smaller, and detailed survey data on these types are not available. Other types of tobacco are grown outside this region in southern Maryland, Pennsylvania, Alabama, Wisconsin, Missouri, and the Connecticut River valley, but production is small and concentrated in a small geographic area.

This study analyzes 1995 Farm Costs and Returns (FCRS) and 1996 Agricultural Resource Management Survey (ARMS) data from a sample of farms that are representative of each of the tobacco regions. The FCRS survey for 1995 included 131 Kentucky and 104 Tennessee burley tobacco farms. (As appendix fig. 2 shows, burley is also grown in several neighboring States, but the survey included only farms from Kentucky and Tennessee.) The 1996 ARMS survey included 71 tobacco farms from the Piedmont Virginia/North Carolina region, 87 from the North Carolina Coastal Plain, 60 from the Pee Dee-Lumber River region, and 42 from Georgia. The text of this report includes discussion of a number of tobacco farm characteristics based on these sample surveys. In the remainder of this appendix, we use these data to describe differing characteristics of tobacco growers in Kentucky, Tennessee, and the four flue-cured regions.

Burley farms tend to be much smaller and burley growers have limited alternative economic opportunities. Production, yields, and reliance on tobacco are generally much lower in Tennessee than in Kentucky. Few of Tennessee's tobacco farmers rely on farming for living expenses. FCRS data show that net farm income aver-

aged \$3,800 per year for Tennessee tobacco farmers in 1995, and 30 percent of operators said they were retired. Tennessee farms averaged 123 acres, with only 3.6 acres of tobacco. By comparison, Kentucky tobacco farms averaged \$13,100 in net farm income, and only a few farmers in the FCRS sample said they were retired. Kentucky burley growers had larger acreage than Tennessee growers, but their farms were still relatively small. Kentucky farms averaged 170 acres, with 5.9 acres in tobacco. Tobacco generated 60 percent of the value of agricultural production on Kentucky tobacco farms and 40 percent on Tennessee farms. As discussed in the text of this report, alternative enterprises in the burley region cannot generate earnings comparable to those of tobacco, so tobacco's share of net earnings is probably much greater. According to our analysis of FCRS data for 1995, the mean acreage of nontobacco farmers in the burley region is similar to that of tobacco farmers, but nontobacco farmers earn far less net income from farming.

In general, tobacco farms in flue-cured regions are much larger and more diversified than burley farms. The Piedmont region is more similar to burley regions than are the other flue-cured regions. Piedmont farms are smaller than farms in other flue-cured regions, but they are still considerably larger than burley farms. Piedmont tobacco farms averaged 292 acres in 1996, with 29.6 acres of tobacco. About 30 percent of flue-cured farms are in the Piedmont region, but they account for only 23 percent of flue-cured production. Piedmont farmers are highly dependent on tobacco income, which accounted for nearly 90 percent of their total value of agricultural production in 1996. Tobacco accounted for about half of gross value of production for the agricultural sector of the Piedmont region in 1996, despite the fact that only 11 percent of farms grew tobacco. The topography and more extensive nonfarm land use in the Piedmont region makes expansion of farms difficult there.

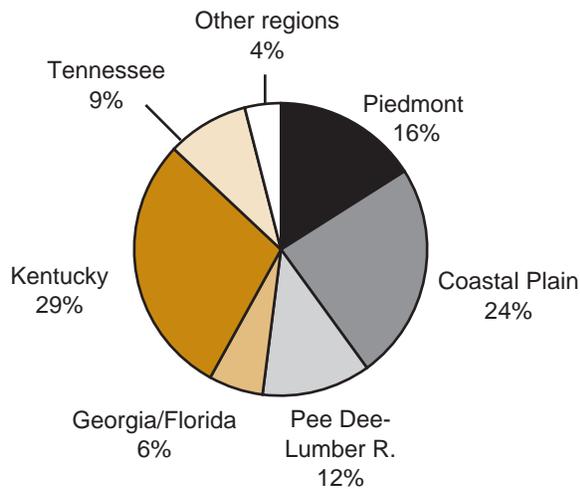
The Coastal Plain is the major flue-cured tobacco production area, accounting for 41 percent of flue-cured farms and 44 percent of production. The soil and climate in this region are well suited to tobacco production, and the topography permits large-scale farming operations. Tobacco growers in this region averaged 419 acres in total, with an average of 42.8 in tobacco. Agriculture is more diversified in the Coastal Plain than in other regions. Tobacco accounted for only 20 percent of agricultural production in the region, and 30 percent of Coastal Plain farms grew tobacco in 1996.

Farms in the Pee Dee-Lumber River region are even larger than those in the Coastal Plain region. They averaged 586 acres, with 47.2 acres in tobacco. About 16 percent of flue-cured producers reside in the Pee Dee-Lumber River region and produce about 20 percent of the crop. This region is somewhat more dependent on tobacco than is the Coastal Plain region. Nearly half of the farms in the Pee Dee-Lumber River region raise tobacco and half of the region's value of agricultural production stems from flue-cured tobacco. The region's tobacco farmers are moderately dependent on tobacco production, with tobacco accounting for 66 percent of the region's total agricultural production value. Tobacco farmers in this region stand out from other regions in two aspects. On average, the region's tobacco farmers are younger than other tobacco producers, and they tend to have higher educational levels (see p. 21). These factors may make it easier for them to adjust to changing financial conditions as changes occur in tobacco programs.

Georgia's flue-cured tobacco production region is the most agriculturally diverse. Only 14 percent of the region's agricultural production is derived from tobacco. Therefore, this region's agricultural economy is not as susceptible to negative impacts from declining tobacco demand as that in the other regions. Tobacco is raised by one out of four farmers in this region, with tobacco accounting for nearly 40 percent of these tobacco farmers' agricultural value of production. Therefore, most of Georgia's tobacco farmers will see some effects from the falling tobacco demand. Georgia tobacco farms are large, averaging 676 acres, with 32.8 tobacco acres. In 1996, this region accounted for only 12 percent of flue-cured production, but the region's share would likely increase if production were not restricted by marketing quotas. Some analysts have speculated that producers in this region might attempt to grow two tobacco crops per year if tobacco quotas did not restrict their production.

Appendix figure 1

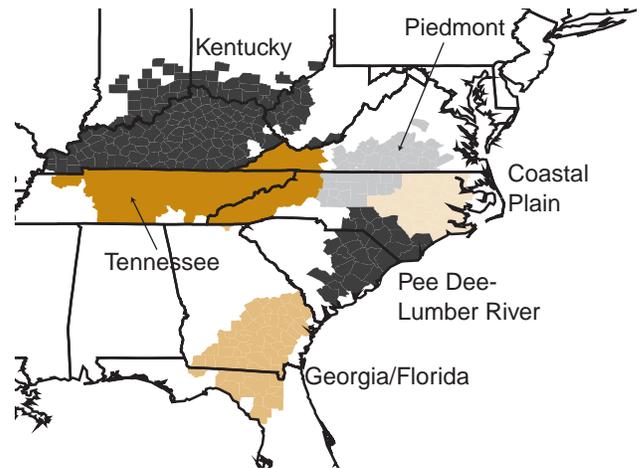
Tobacco cash receipts by region, 1994-96



Source: Calculated by ERS using data from U.S. Bureau of the Census, 1977 Census of Agriculture.

Appendix figure 2

Major tobacco-growing regions



Source: Economic Research Service, USDA.

Appendix table 1—Selected characteristics of tobacco production regions

Region	Geographic location ¹	Within tobacco type		Within each region		Average farm size ³	Average tobacco acres
		Tobacco production	Tobacco farms	Tobacco share of all production ²	Tobacco share of all farms		
		-----Percent-----				---Acres---	
Burley, 1995		100	100	NA	NA	154	5.1
Kentucky	Kentucky, southern Indiana, Ohio, West Virginia	87	65	37	51	170	5.9
Tennessee	Tennessee, western North Carolina, southwest Virginia	13	35*	7	21	123	3.6
Flue-cured, 1996		100	100	NA	NA	442	38.3
Piedmont	Virginia/North Carolina border	23	30	51*	11	292	29.6
Coastal Plain	Eastern North Carolina	44	41	20	30	419	42.8
Pee Dee-Lumber River	Southeast North Carolina, eastern South Carolina	21	16	49	49	586	47.2
Georgia	Georgia, northern Florida	12	13	14	26	676	32.8

*Coefficient of variation is between 25 and 50 percent, indicating low reliability of the estimate.

NA=not available.

¹Survey farms were located in these States only: Kentucky, Tennessee, Virginia, North Carolina, South Carolina, and Georgia.

²Tobacco share of value of all farm production in region.

³Average acres operated per farm.

Source: ERS analysis of 1995 Farm Costs and Returns Survey for burley tobacco and 1996 Agricultural Resource Management Study for flue-cured tobacco. Coefficients of variation (C.V.'s) of estimates are less than 25 percent unless indicated otherwise. The C.V. is computed by dividing the estimate's standard error by the estimate and multiplying by 100. Lower C.V.'s indicate more reliable estimates.